



Oregon

John A. Kitzhaber, M.D., Governor

Department of Environmental Quality ^{OK 1398} ^{Amended 8/6/01} Sq

811 SW Sixth Avenue
Portland, OR 97204-1390
(503) 229-5696
TTY (503) 229-6993

Mr. George Sylvester
Vopak USA Inc.
32131 Steven Way
Conifer, CO 80433

August 6, 2001

Re: Excavated Soil "Contained-in" Determination
Vopak USA Inc.
EPA ID No. ORD 00922 7398
RCRA Docket No. 1087-10-18-3008

FILE COPY

Dear Mr. Sylvester:

The Oregon State Department of Environmental Quality (ODEQ) is in receipt of your letter dated May 16, 2001, in which Vopak USA Inc. (Vopak), formerly Van Waters & Rogers Inc. requested a contained-in determination for soil to be excavated during construction of the interim corrective measure (ICM) at Vopak's Portland, Oregon facility.

Background:

Four incidents of chemical releases were reported at the Vopak facility between 1979 and 1985. In 1989 the United States Environmental Protection Agency (EPA) issued an Administrative Order on Consent (the Order) under Section 3008(h) of Resource, Conservation and Restoration Act, (RCRA). The Order required Vopak to investigate the nature and extent of contamination caused by chemical spills, and to implement ICMs as necessary to reduce risks to human health or environment before selection and implementation of a final remedy. The chemicals detected in soil and groundwater occurred in the areas that are correlated with the known release areas. More detailed evaluation of the nature and extent of contamination is provided in the *RCRA Facility Investigation (RFI) Report* (Harding Lawson Associates, July 1993).

Currently, Vopak is in the process of implementation of the ICM. The objective of the ICM is to control the off-facility migration of volatile organic compounds (VOCs) in groundwater from the southeast corner and from the north end of the Vopak property. The ICM system will consist of extraction wells and pumps, pretreatment system, air stripper, and VOC vapor treatment system. The extraction wells will be installed at two opposite ends of the facility and the groundwater transfer pipe will transfer extracted groundwater to a treatment pad for treatment. The transfer pipe will be approximately 1600 ft long and will be buried at 2.0 to 2.5-feet below ground surface (bgs). Installation of the transfer piping at up to 2.5-ft bgs will require an excavation of approximately 1600 ft long trench; 380 cubic yards total volume. The soil contains the following listed hazardous wastes: acetone (U002); 2-butanone (U159); m,p-xylenes (U239); 1,2-dichloroethylene (DCE) (U079); TCE (U228); tetrachloroethylene (PCE) (U210);

RECEIVED
AUG 09 2001

and 1,1,1-trichloroethane (TCA) (U226). PCE and TCE have the potential to be characteristic wastes as well. Proposed trench alignment with respect to the chemical release areas is shown in enclosure 1.

In January 2001, Vopak submitted the *Soil Sampling of Trench Alignment During ICM Construction Plan* (IT Corporation January 2001) which included a Quality Assurance Plan Addendum. The purpose of the sampling was to allow Vopak to develop plans for management and/or disposal of the excavated soil prior to beginning excavation activities.

The results of soil sampling along the trench alignment were provided to EPA and ODEQ in the *Interim Corrective Measure Soil Management Plan* (IT Corporation, April 2001).

Prior to collection of the soil samples, the soil was profiled at 0.5 to 1.0-foot intervals bgs to the final sampling depth of 2.0 to 2.5 feet, the depth of the piping trench. The profiling consisted of a description of soil type and field-screening the sample for VOCs using a photoinization detector (PID). The majority of the sampling locations registered PID readings between 0 and 10 ppm by volume. The soil samples submitted for chemical analysis were collected from the depth of the highest PID reading, generally at depth of 2.0 to 2.5 feet bgs. The sampling frequency selected was intended to provide a representative characterization of soils along the proposed trench alignments. The proposed trench is located along the extreme western property/fence line and is, with the possible exception of the area near the former reclaim shed, outside the areas where chemical handling activities were performed, see enclosure 1. Nondetect to low concentrations of VOCs were anticipated in most portions of the trench, with the exception of the reclaim shed area, and therefore soil samples were collected approximately every 100 feet along the trench alignment, representing one sample per approximately 35 cubic yards of soil and analyzed for volatile organic compounds by EPA Method 8260b. All detected compounds are summarized in enclosure 2. The sampling data support the rationale for sampling frequency selection, with every sample outside the reclaim shed having low to nondetect levels of VOCs.

On May 16, 2001, Vopak requested a contained-in determination for the excavated soil with the intent to replace as much as possible of the excavated soil in the trench, after the piping is installed. Excess excavated soil would be disposed as a solid waste at the Columbia Ridge Subtitle D Landfill in Arlington, Oregon. Details regarding soil management are provided in the *Interim Corrective Measure Soil Management Plan* (IT Corporation, April 2001). This plan also provides a contingency plan for soil management in the event soil encountered during excavation has visual or screening results that vary from those encountered in the January 2001 sampling event. Such soil will be managed separately from other soils. The soil will be placed in a separate, lined and covered consolidation area that will be maintained in case such soil is encountered. Soil will be sampled and analyzed by EPA Method 8260B. In the event the results are above the risk based levels listed in Table 1 and/or above the land disposal restriction (LDR)

universal treatment standards (USTs) listed in 40 C.F.R. 268.48 the soil, if not suitable for backfill in the trench from which it was excavated, must be profiled and then disposed in accordance with all applicable State and Federal requirements.

Analysis:

ODEQ and EPA require that soil (and other environmental media), although not wastes themselves, be managed as if they were hazardous waste if they contain listed hazardous waste or exhibit characteristic of hazardous waste. Under the "contained-in" policies of both EPA and ODEQ, a decision can be made by the appropriate regulatory agency (in this case, ODEQ) that the soil or other medium contains such low levels of listed hazardous waste that they need not be managed as hazardous waste. In making the contained-in determinations, ODEQ compares the maximum concentrations of constituents found in the medium with conservative, risk-based concentrations based on direct contact with the contaminated medium. Where appropriate, other receptors and pathways are considered.

Table 1 shows maximum values detected in the soils to be excavated at the facility along with risk-based concentrations.

Table 1
Comparison of Maximum Soil Concentrations
to Risk-Based Concentrations

Contaminant of Concern and specific waste code	Maximum Concentration ^a µg/kg	EPA Region 9 PRG Tables ^b Industrial exposure, µg/kg	EPA Region 9 PRG Tables ^b , Residential Exposure µg/kg	Oregon State DEQ ^c	Higher than any Risk-Based Standard ?	TC ^e Standard	20-times TC ^e	Higher than 20-times TC ^e ?
Acetone (U002)	<2,400	6,200,000	1,600,000	na ^d	No	na ^d	na ^d	na ^d
2-Butanone (U159)	<2,400	28,000,000	7,300,000	na ^d	No	na ^d	na ^d	na ^d
m,p-Xylenes (U239)	110	210,000 ^f	210,000 ^f	2,500,000	No	na ^d	na ^d	na ^d
cis-1,2-DCE (U079)	170	150,000	4,300	20,000,000	No	na ^d	na ^d	na ^d
TCE (U228), (D040)	2,000	6,100	2,800	20,000	No	500	10,000	No

PCE (U210), D(039)	2,500	19,000	5,700	10,000	No	700	14,000	No
1,1,1-TCA (U226)	390	1,400,000	630,000	9,000,000	No	na ^d	na ^d	na ^d
VC ^g	<7.1	830	150	50	No	200	4,000	No

^a Concentration in µg/kg (ppb)

^b EPA Region 9 Preliminary Remediation Goals (PRG)

^c Oregon State Department of Environmental Quality (ODEQ) Numerical Soil Cleanup Levels 340-122-045(7) Appendix 1 Industrial Maximum Allowable Soil Concentration in µg/kg (ppb)

^d not available

^e Toxicity Characteristic (TC) from Table, 40 C.F.R. 261.24 in µg/kg (ppb)

^f These concentrations represent soil saturation, above which groundwater is likely to be threaten

^g Vinyl Chloride (VC) is a highly toxic product of the PCE, TCE, and DCE biodegradation. The compound was analyzed for but was not detected at or above method detection limit.

Based on the analysis of soil to be excavated during the trenching operation, and the fact that the soil that will not be replaced in the trench represents a subset of such soil, ODEQ has determined that the excess soil will not have to be managed as hazardous waste, provided that it is disposed in a Subtitle D landfill, and that the *Interim Corrective Measure Soil Management Plan* (IT Corporation, April 2001) is followed. In addition, based on the data provided by Vopak, concentrations of contaminants found in soil along the trench alignment are below TC regulatory standards, i.e., soil does not exhibit characteristics of hazardous waste for TCE and PCE.

A contained-in decision is not necessary, and therefore not appropriate, for contaminated soils which are excavated and replaced within an area of contamination (AOC), because this activity does not constitute "placement" of hazardous waste in regulatory sense, and therefore does not trigger hazardous waste treatment, storage or disposal requirements, regardless of the concentrations of the contaminants. In Vopak's case it is reasonable to apply the AOC concept for the purpose of replacing excavated soil. The AOC is recognized by regulators as a certain discrete area of generally dispersed contamination, and for the purposes of RCRA, movement of contaminated media within an AOC does not trigger RCRA requirements. A trenching scenario such as this one falls within the above description. Therefore, a contained-in decision is appropriate only for the soil excavated but not replaced during this activity. This letter addresses only that soil for the purposes of making a contained-in decision.

Limitations:

This "no longer contains" hazardous waste determination is based only upon the

information provided to ODEQ by Vopak. Any new or different information pertaining to this request not submitted by Vopak, and not evaluated by ODEQ pursuant to this request, may require ODEQ to reevaluate this determination.

This determination can only be applied to the volume of excavated soil from the piping trench as identified in the referenced contained-in request, and cannot be applied to management of other media contaminated under similar circumstances, with similar constituents, at different locations in the future or retroactively.

Management of this media, both prior to and after receipt of this determination, must be accomplished in compliance with all applicable federal, state and local regulations.

Should you have questions regarding with determination, please don't hesitate to call ODEQ, Dave St. Louis at 503/229-5532, or EPA , Anna Filutowski at 206/553-5122.

Sincerely,

A handwritten signature in black ink, appearing to read 'Dave Rozell', written over a horizontal line.

Dave Rozell, Acting Manager
Hazardous Waste Policy
& Program Development

Enclosures

Cc: Dave St. Louis
Anna Filutowski

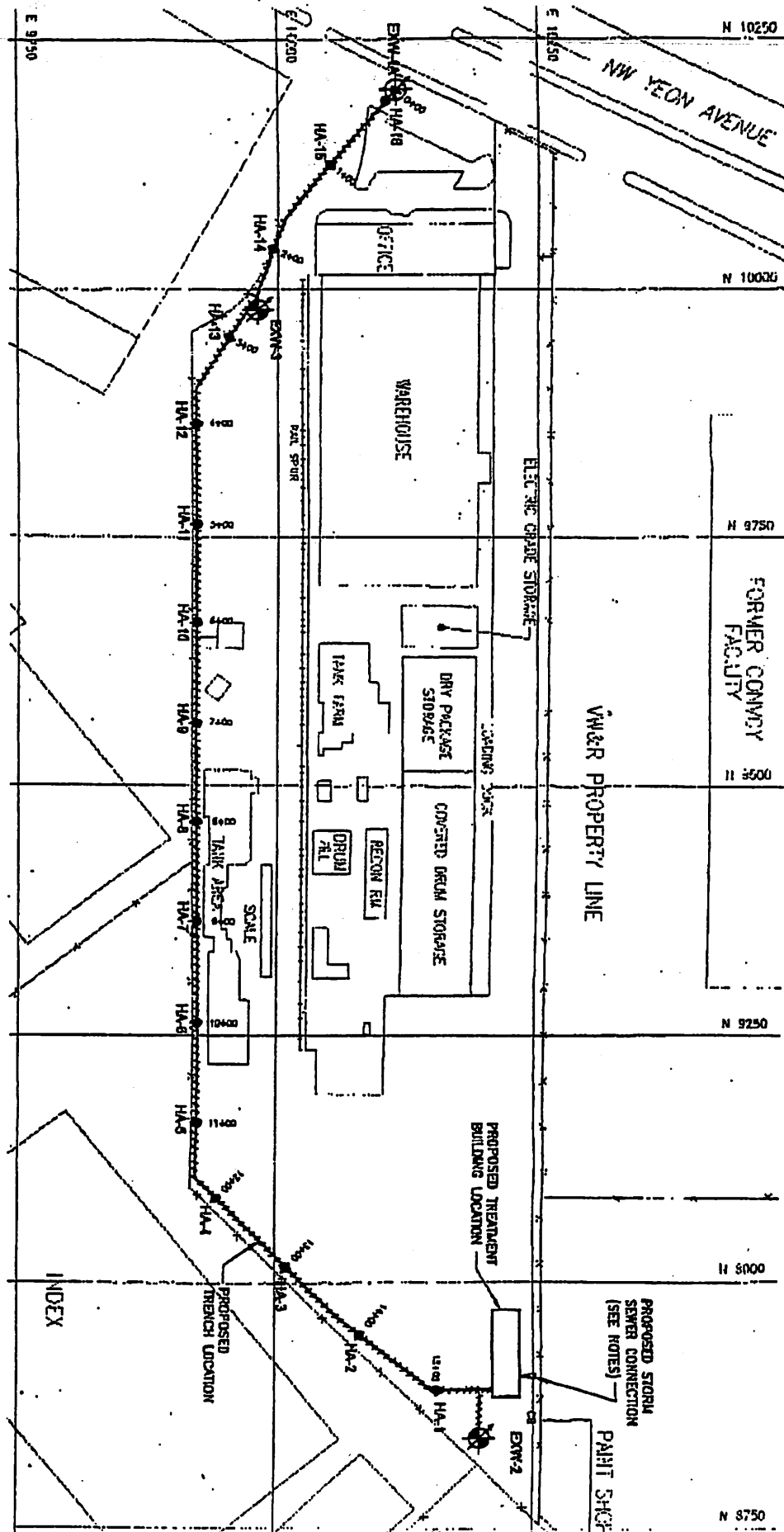
OFFICE	DRAWN BY	CHECKED BY	APPROVED BY	DRAWING NUMBER
EDM-111	MPW/1000	J-13-01		820161.99

LEGEND:

GROUNDWATER EXTRACTION WELL
 PROPOSED GROUNDWATER EXTRACTION WELL
 TRENCH SOIL SAMPLE
 PROPOSED GROUNDWATER TRANSFER PIPING TRENCH

0 100 200
SCALE (ft)

Enclosure 1



THE
TRENCH SOIL SAMPLE LOCATION
JANUARY 29, 2001
VAN WATERS & ROGERS, INC.
PORTLAND, OREGON

Summary of ICM Trench Alignment Soil Sampling VOC Results (µg/kg)
 Van Waters & Rogers Inc.
 Portland, Oregon

Table 1

Sample ID	Depth (ft)	Acetone	2-Butanone	m,p-Xylenes	cis-1,2-DCB	TCE	PCB	1,1,1-TCA
HA-1	2.5	250	27	<6.4	<6.4	<6.4	<6.4	<6.4
HA-2	2.5	<63	<25	<6.3	<6.3	<6.3	<6.3	<6.3
HA-3	2.5	120	<25	<6.3	<6.3	<6.3	<6.3	<6.3
HA-4	2.0	<59	<24	<5.9	<5.9	<5.9	<5.9	<5.9
HA-5	2.5	130	<27	<6.7	<6.7	<6.7	<6.7	<6.7
HA-6	2.5	<54	<22	<5.4	<5.4	<5.4	<5.4	<5.4
HA-7	2.0	<2,200	110	<56	<56	<56	<56	<56
HA-8	2.0	290	<27	<6.7	<6.7	<6.7	<6.7	<6.7
HA-9	2.5	420	<160	<39	170	83	340	<39
HA-10	2.5	<2,400	<2,400	NS	<60	NS	2,500	390
HA-11	NS	NS	NS	NS	<6.2	23	51	<6.2
HA-12	2.5	<62	<25	<7.2	<7.2	<7.2	<7.2	<7.2
HA-13	2.5	<72	<29	<5.6	<5.6	<5.6	<5.6	<5.6
HA-14	2.5	<56	<22	<5.9	<5.9	<5.9	<5.9	<5.9
HA-15	2.5	<59	<23	<6.3	<6.3	<6.3	<6.3	<6.3
HA-16	2.5	<63	<25	<6.1	<6.1	<6.1	<6.1	<6.1
HA-17 ^b	2.5	<61	<24	<6.1	<6.1	<6.1	<6.1	<6.1

NOTE: All samples collected January 29, 2001.
 • Sample HA-11 was not submitted due to insufficient sample recovery (pea gravel sample).
 • Sample HA-17 is a field duplicate sample of HA-16.

ROUTING AND TRANSMITTAL SLIP

Date 10-24-01

TO: (Name, office symbol, room number,
building, Agency/ Post)

Initials Date

1. Anna
2. File Biv
- 3.
- 4.
- 5.

Action	File	Note and Return
Approval	For Clearance	Per Conversation
As Requested	For Correction	Prepare Reply
Circulate	For Your Information	See Me
Comment	Investigate	Signature
Coordination	Justify	

REMARKS

- Please Code

- This copy will be filed in the
Records File

Thanks

DO NOT use this form as a RECORD of approvals, concurrences, disposals,
clearances, and similar actions

FROM: (Name, org. symbol, Agency/ Post)

Room No. — Bldg.

Amber

Phone No.

3-0784

5041-103

OPTIONAL FORM 41 (Rev. 1-94)

Prescribed by GSA

UNICOR FPI - SST